

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-28-2008 has been entered.

Claim Objections

Claim 28 is objected to because of the following informalities:

1. Claim 28 recites, "its respective measurement module" at lines 9 and 12; however, these associations lack antecedent basis in the claim. Applicant is invited to consider language such as,

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 30, 20 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 30 recites the broad recitation, at line 5, "at least one measurement module", and the claim also recites, at line 15, "different measuring modules" which is the narrower statement of the range/limitation. The recitation "at least one" is considered broader than the recitation, "modules" because "at least one" requires one or more; while "modules" requires two or more.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,839,636 to Sunshine et al. in view of Horowitz and Hill.

Regarding claim 28, Sunshine discloses a system used in measurement in process automation ('636, see abstract) in a measurement device comprising comprising: a central unit ('636, fig. 2, ref. 235); a central transmission line ('636, fig. 2, connection of ref. 230 to ref. 235); at least one measurement module connected to said central unit for transferring a data signal over said central transmission line ('636, fig. 2, ref. 201); a multiplexer ('636, fig. 2, ref. 225); and a measurement module transmission line connecting its respective measurement module to said multiplexer ('636, fig. 2, ref. 211), wherein: the output of said multiplexer is connectable with said central unit ('636, fig. 2, ref. 225 connects to ref. 235 through ref. 230.

The claims further disclose selection lines for the multiplexer; which is not explicitly disclosed by Sunshine.

Horowitz and Hill discloses selection lines (fig. 9.63, channel select in) which are separate from the transmission line (fig. 9.63, high byte out and low byte out) which are used to select an analog input, with a particular pattern of the channel select lines used to select each on the analog inputs.

Therefor it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the multiplexer selection lines of Horowitz and Hill with the invention of Sunshine to allow multiple sensors to be read by one processor.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,839,636 to Sunshine et al. in view of Horowitz and Hill.

Regarding claim 31, Sunshine discloses a method for a measuring device for process automation ('636, see abstract) having a central unit ('636, fig. 2, ref. 235) and at least one measurement module ('636, fig. 2, ref. 201) and a multiplexer which selects measuring modules ('636, fig. 2, ref. 225).

The claims further disclose selection lines for the multiplexer; which is not explicitly disclosed by Sunshine.

Horowitz and Hill discloses selection lines (fig. 9.63, channel select in) which are separate from the transmission line (fig. 9.63, high byte out and low byte out) which are used to select an analog input, with a particular pattern of the channel select lines used to select each on the analog inputs, and a channel advance line which would select each input a plurality of times.

Therefor it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the multiplexer selection lines of Horowitz and Hill with the invention of Sunshine to allow multiple sensors to be read by one processor.

Response to Arguments

Applicant's arguments with respect to claims 20, 23, 28, 30 and 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Cherry whose telephone number is (571) 272-2272. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJC

/John E Barlow Jr./
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